

University of Manitoba
Department of Sociology 077.346, Selected Topics:
The Social and Environmental Implications of Technology
L01, Term 2 – Summer Evening 2003

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Office Hours: Tuesday and Thursday, 6 – 6:50 pm.
Meeting Times: Tuesday and Thursday, 7 – 9:30 pm.
Location: Room 405 Tier
3 credit hours

REQUIRED MATERIALS:

1. **Reading Package:** A bound package of selected readings from various sources (available for purchase in the bookstore).
2. **The Real World of Technology** (revised edition)
Ursula M. Franklin (Anansi Press) 1999.
(available in the bookstore)

COURSE OBJECTIVES AND CONTENT:

This course has two objectives: First, to provide a basic understanding of the interrelationship among technology, society, and the natural environment in the modern era; and second, to encourage critical and comprehensive thinking about the social consequences of contemporary technology.

The course proceeds from the assumption that a better understanding of the social and environmental implications of technology is an important (though often neglected) part of being an educated and responsible citizen. This is especially true at the dawn of a new millennium as we witness the astounding and unprecedented transformative power of science and technology. The position taken here is that serious social debate and a rethinking of the role of technology is needed if technology is to become more compatible with human life, society and, the biosphere.

We will examine a variety of problematic social issues in order to illustrate the increasing number of value conflicts and ethical dilemmas triggered by recent technological innovations. Also to be considered are the cultural foundations and assumptions underlying our technological society.

The course begins with a brief historical look at the origins of the mechanistic worldview. We then analyze the chain-reaction-like process of industrialization and review some of the major social consequences of the Industrial Revolution. Next, we contrast the structure of contemporary technology with that of pre-industrial technology.

Following this, we examine the change in the nature of technological knowledge itself, as it becomes placed on a scientific rather than experiential basis. Finally, the course explores the profound cultural transformation of modern society brought about by computerization and other pervasive technologies.

Specific topics and concepts to be discussed include: the interactive nature of the relationship between technology, society, and the biosphere; technology as a system; society as the environment and context of technology; the separation of knowledge from experience; computer-mediated communication; technique and culture; technological determinism; techno-stress; technological ‘neutrality’; electronic surveillance; appropriate (or holistic) technology; and, technologies of production and environmental degradation.

COURSE REQUIREMENTS:

1. One in-class test worth 20 percent of your final grade, to be held on July 15, 2003.

It will be made up of short answer and/or essay questions, and is designed to assess your knowledge of the concepts and ideas developed in the lectures as well as your understanding of the assigned readings.

2. One short written report focussing on assigned readings, worth 30 percent of your final grade. Due date is July 24, 2003. This report or commentary is intended to help you think critically and synthesize the ideas contained in the readings. It is also designed to inspire your analytical thinking and to prepare you for class discussion. You are required to do more than summarize. Rather, you should assess the validity of the main arguments and discuss any problems raised by the author’s point of view. Your report should be 3 to 5 pages maximum, typed, double spaced, and with standard font sizes.

3. A research paper, worth 40 percent of your final grade. Due date is August 7, 2003. You will be required to select a research topic in the first three weeks of the course and discuss it with me before proceeding. See the attached list of possible essay topics at the end of this outline, or select a topic of your own, provided you get my approval. You will be expected to carry out library research for your paper and engage in a critical analysis of your topic using concepts developed in the lectures and the readings. Papers are to be typed, double-spaced, and grammatically correct with a target length of 8 to 10 pages and a minimum of 5 sources. Be sure to follow proper rules for references and citing of sources. For guidance in writing research papers in the social sciences, there are resources available in the library. Consult them. **Late papers will not be accepted.**

4. Participation is a significant component of this course worth 10 percent of your final grade. Learning occurs best in a situation where students are actively engaged in sharing their insights with other students and the instructor. Therefore, students are strongly encouraged to contribute to classroom discussion. Moreover, the readings for this course are an essential complement to the lectures – it is crucial that assigned

readings are completed and reflected upon before class. Discussion questions will be provided to guide your reading of the material. Students are also encouraged to bring their own questions in response to the assigned readings.

In addition, if you find an article in a current newspaper or magazine that is relevant to this course, please bring it in.

NOTE: There is no final examination in this course.

GRADING POLICIES

1. Make-up tests will only be allowed for legitimate reasons (i.e. illness) in which case a medical certificate is required. You must notify me within one week after a missed test to arrange for a make-up. Note that the make-up test will be different in content and may vary in form. If a test is not written a grade of 0 will be assigned.
2. Failure to hand in written reports on time without a legitimate reason will result in a penalty of 5 percent per day, including Saturday and Sundays.
3. Research papers submitted late will not be accepted, and a grade of 0 will be assigned.

The following letter/percentage/GPA/descriptive scale will be used:

90-100	A+	(4.5)	Exceptional
80-89	A	(4.0)	Excellent
75-79	B+	(3.5)	Very Good
70-74	B	(3.0)	Good
65-69	C+	(2.5)	Satisfactory
60-64	C	(2.0)	Adequate
50-59	D	(1.0)	Marginal
0-49	F	(0)	Failure

ACADEMIC DISHONESTY AND STUDENT RESPONSIBILITY

Academic dishonesty is a very serious offence, with grave consequences. Students should acquaint themselves with the University of Manitoba's policy on 'plagiarism and cheating' and 'exam impersonation' found in the University Undergraduate Calendar.

Note: Last day for voluntary withdrawal from second term summer evening courses without academic penalty is July 25, 2003.

INVITATION TO STUDENTS

Students are warmly invited to introduce themselves, and to drop by during office hours.

PRELIMINARY SCHEDULE (SUBJECT TO CHANGE)

Note: Specific readings will be assigned in class.

June 24 & 26	Introduction, and, Origins of the Mechanistic World View
July 1	No Classes (Canada Day)
July 3	The Industrial Revolution
July 4	Characteristics of Industrial Societies (class in lieu of Canada Day)
July 8	The Process of 'Rationalization' / Role of Technique
July 10	The Structure of Contemporary Technology / Technology as a System
July 15	TEST (worth 20% of grade)
July 17	Computerization and the 'Information Revolution'
July 22	Advanced Industrial Society and the Transformation of Work
July 24	WRITTEN REPORTS DUE (worth 30% of grade) & Technological Culture / Techno-Stress
July 29	Controlling Technology / Technological Risk
July 31	Electronic Surveillance / Privacy in a Technological Society
August 5	Technology and the Biosphere
August 7	RESEARCH PAPERS DUE (worth 40% of grade) & Alternative / Appropriate Technologies

LIST OF READINGS

- Capra, Fritjof. The Turning Point: Science, Society, and the Rising Culture. pp.40-49, 53-69
- Landes, David. The Unbound Prometheus: Technological Change and Industrial Development. pp. 1-12, 41-53, 80-87
- Sale, Kirkpatrick. Rebels Against the Future: The Luddites and Their War Against the Industrial Revolution. pp. 25-59
- Weber, Max. "Science as a Vocation" in From Max Weber: Essays in Sociology (H. H. Gerth and C. Wright Mills, eds.). pp. 138-156
- Franklin, Ursula. The Real World of Technology. pp. 11-35
- Grant, George. Technology and Justice. pp. 11-34
- Winner, Langdon. The Whale and the Reactor: The Search for Limits in an Age of High Technology. pp. 3-31
- Ellul, Jacques. "The Present and the Future" in Technology as a Human Affair. pp. 343-357
- Postman, Neil. Amusing Ourselves to Death. pp. 64-80
- Turkle, Sherry. Life on the Screen. pp. 9-26, 255-269
- Kling, Rob. Computerization and Controversy. pp. 75-78, 614-633, 637-642, 645-651

- Dreyfus, Hubert and Stuart. "Why Computers May Never Think Like People" in Computers in the Human Context. pp. 125-143
- Birkerts, Sven. The Gutenberg Elegies: The Fate of Reading in an Electronic Age. pp. 3-7, 70-76, 210-229
- Rifkin, Jeremy. Time Wars. pp. 19-37, 123-141
- Menzies, Heather. Whose Brave New World? pp. 51-79
- Duffy, Ann, et al. Good Jobs, Bad Jobs, No Jobs. pp. 76-96
- Rifkin, Jeremy. The End of Work. pp. 42-56, 59-68, 109-127
- Zuboff, Shoshana. In the Age of the Smart Machine. pp. 58-96
- Lyon, David. The Electronic Eye: The Rise of Surveillance Society. pp. 3-19, 83-101
- Perrow, Charles. Normal Accidents: Living with High Risk Technologies. pp. 3-12, 304-315
- Commoner, Barry. Making Peace with the Planet. pp. 41-55, 79-102
- McMichael, A. J. Planetary Overload. pp. 259-291, 294-311

SUGGESTED RESEARCH PAPER TOPICS

Privacy in an Information Age
 Computers, Education, and Learning
 The Global Information Society (the networked economy, etc)
 Ethics and Information Management
 Technology and Democracy
 Virtual 'Communities' and the Internet
 Virtual Reality and Simulated Environments
 Artificial 'Intelligence' vs. Human Expertise
 Technological Determinism
 Women in Computing (Technology and Gender Issues)
 Biotechnology and Genetic Engineering
 Computer Subcultures – hackers, software programmers, etc.
 Neo-Luddism
 Computer-Mediated Communications (e-mail, computer conferencing, etc.)
 Technology and the Military (computerization and warfare, etc.)
 Social Impact of Television
 Electronic Surveillance, Computer Monitoring, Computer Identification, etc.
 Technique and Culture
 Urbanization, Sustainability, and Human Health
 Techno-stress (information overload, etc.)
 Healthy Workplace Design
 Alternative or Appropriate Technology
 Preventive Approaches to Pollution Prevention
 Technological Change and Life on the Job
 Telecommuting
 Technology and the Myth of Progress
 Technology and the Limits to Growth

Technology, Language, Consciousness and Identity
Technological Unemployment (automation, etc.)
Technology, Occupational Health, and Safety
Technology, and the Abstraction of Human Experience
Technophobia and Technophilia
Controlling Technology / Technological Risk
Genetically Modified Foods